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Shin-ichirou Ono

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EXAMINER

CALEY, MICHAEL H

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/849,285

Applicant(s)

ONO ET AL

Examiner

MICHAEL H. CALEY

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 February 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 3-9 and 11-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☒ Claim(s) 10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 August 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SI-08)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 3, 4, 7-9, 11-15, and 18-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Chou (U.S. Patent No. 7,095,457).

Regarding claim 1, Chou discloses a backlight unit comprising:

a chassis (Figure 2 element 10) having a bay (13 and 11), wall means defining the bay, an aperture (13) opening to the bay, and an optical panel (20) that includes at least one light management feature (Column 3 lines 7-9), the optical panel having one side forming a wall portion of the wall means;

a light emitting structure (31) placed within the bay to light a two dimensional area on the one side of the optical panel, the light emitting structure having at least one linear light source (31) and a power control circuit (32) coupled to the linear light source; and

a bracket (33 and 36) for quick installation and removal of the light emitting structure through the aperture to and from the bay, the bracket having a support structure carrying the light emitting structure (Figure 2), the support structure having a frame for

supporting the linear light source and a circuit mount having two portions for supporting the power control circuit (Column 3 lines 27-33),

wherein the bay within the chassis includes a first region for receiving the frame of the support structure and two second regions for receiving the two portions of the circuit mount of the support structure respectively (Figures 2 and 3).

Regarding claim 3, Chou discloses the light emitting structure as including a plurality of linear lamps (31) and a power control circuit (32) coupled to the linear light source.

Regarding claim 4, Chou discloses the frame as having a predetermined line and two sides spaced along the predetermined line, and each of the two portions of the circuit mount as extending from one of the two sides in a remote direction from the other of the two sides; and wherein, at the two sides, the frame holds two ends of each of the plurality of linear lamps respectively, and the circuit mount holds the power control circuit (Figure 2 element 30).

Regarding claims 7 and 8, Chou discloses a light leak prevention feature including a light shield arranged to cover the aperture when the bracket is positioned for installation of the light emitting structure to the bay (Figure 2 element 33).

Regarding claim 9, Chou discloses the chassis as including a guide for the frame of the support (Figure 2 element 11) to slide relative to the chassis; and wherein the light leak

prevention feature includes a second light shield arranged to cover a clearance between the frame of the support structure and the guide of the chassis (Figure 3).

Regarding claim 11, Chou discloses the chassis and the support structure as including means for bringing the bracket into firm engagement with the chassis (Figure 2 element 35).

Regarding claims 12 and 13, Chou discloses the first light management feature as a diffusing feature within the optical panel and the second light management feature as selected from a brightness enhancing film and a light diffusing film (Column 3 lines 7-9).

Regarding claim 14, Chou discloses the chassis as dividable into four sections, each having at least one frame portion providing a groove receiving one of four sides of the optical panel (Figures 2 and 3).

Regarding claims 15, 18, and 19, Chou discloses a display having the proposed backlight unit having a light control device (Column 2 line 61).

Regarding claim 20, Chou discloses the method of light source replacement further including the step of pulling the bracket out of the chassis to remove the light emitting structure for light source replacement (Figures 2 and 3).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chou in view of Yamamoto (U.S. Patent No. 6,445,373).

Chou fails to disclose the frame as including two frame halves as proposed. Yamamoto, however, teaches two frame halves interposing therebetween the two ends of each of the plurality of linear lamps, the two frame halves being of the identical structure (Figure 3 element 42).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to interpose the linear lamps between two frame halves as proposed. One would have been motivated to form the frame to have two halves as a means of supporting and providing a wiring harness for the lamps (Column 6 lines 43-60).

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chou in view of Yamamoto and in further view of Nakano (U.S. Patent No. 6,545,732).

Chou as modified by Yamamoto discloses at least one of the halves as formed with a plurality of cutouts over the entire length of each of the two sides (Yamamoto: Figure 3 element 42). Chou fails to disclose a rubber mount as holding one of the two ends of each of the plurality of linear lamps. Nakano, however, teaches rubber mounts for holding the lamp in place with respect to the frame (Column 2 line 63 – Column 3 line 4).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to form rubber mounts holding an end of the lamp as proposed. One would have been motivated to form the frame with such rubber mounts to maintain positional alignment of the lamp within the housing as taught by Nakano.

Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chou in view of Chen et al. (U.S. Patent No. 7,150,557 “Chen”).

Regarding claim 16, Chou discloses a first light control device having a first optical panel between the first light control device and the bay. Chou fails to disclose a second light control device wherein the light emitting structure is placed between the first and second optical panels. Chen, however, teaches first and second light control devices and first and second optical panels as proposed such that the light emitting structure is placed between the first and second optical panels (Figure 5 elements 54A, 58 and 60).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to form first and second light control devices and first and second optical panels and to place the light emitting structure between the first and second optical panels as proposed. One would have been motivated to form the second light control device and optical panel as proposed to provide a second display panel without the need of additional backlighting electronics (Columns 1-2).

Regarding claim 17, Chou as modified by Chen discloses the light control devices as liquid crystal displays attached to the chassis (Column 2 line 31); wherein the first and second optical panels form wall portions of the wall means; and wherein the light emitting structure placed within the bay between the first and second optical panels lights two-dimensional areas as proposed (Chen: Figure 5; Chou: Figure 2).

Allowable Subject Matter

Claim 10 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The prior art fails to disclose or suggest the bay as including first and second regions for receiving the two portions of the circuit mount, guide spaces, and a second light shield each as proposed in claim 10.

Response to Arguments

Applicant's arguments filed 6/12/08 have been fully considered but they are not persuasive.

Regarding the rejection of claims 1, 3, 4, 7-9, 11-15 and 18-20, Applicant argues "there is no differentiation of regions with the casing (10) for receiving the illumination units (31) and the voltage transforming units (32)" and accordingly that Chou does not disclose the claim limitations "wherein the bay within the chassis includes a first region for receiving the frame of the support structure and two second regions for receiving the two portions of the circuit mount of the support structure respectively". The examiner disagrees and maintains the rejection.

On Page 10 of Remarks, Applicant states "Specifically, the illumination units (31) and voltage transforming units (32) are disposed at the front and rear side of the rack (30), respectively. When the rack (30) is considered as a partition between the first region and the two second regions of the bay, Chou clearly discloses the above recited limitations. Further, the claims do not require a physical feature differentiating the regions.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL H. CALEY whose telephone number is (571)272-2286. The examiner can normally be reached on M-F 8:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David C. Nelms can be reached on (571) 272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael H. Caley/

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Art Unit: 2871

Primary Examiner, Art Unit 2871